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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/796,301	03/10/2004	Jun Hamakita	K06-167785M/TBS	9114
21254	7590	01/26/2006	EXAMINER	
MCGINN INTELLECTUAL PROPERTY LAW GROUP, PLLC 8321 OLD COURTHOUSE ROAD SUITE 200 VIENNA, VA 22182-3817			LUM VANNUCCI, LEE SIN YEE	
			ART UNIT	PAPER NUMBER
			3611	

DATE MAILED: 01/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/796,301	Applicant(s) HAMAKITA ET AL.	
	Examiner Lee Lum	Art Unit 3611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) all is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. An Amendment was filed 11/17/05 in which Claims 12-15 were also added.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

A. Claims 1-10 and 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okaniwa et al 6444621 in view of Oka et al 6782771, and Alexander 4822505.

Okaniwa discloses an electric power steering device (c1, ln 16-18; "pinion assist type electric power steering") comprising

Grease (c2, 13-14; "grease composition") having a worked penetration of less than 300 (c6; "Table 1", item 11).

The reference does not disclose details of the steering system, while Oka shows a well-known system, as depicted in at least fig 1, including

Motor 6 and shaft 60,

a male member as including a spline shaft (unidentified in fig 1; housed within female member 82), and female member 82, jointed together for transmitting rotation of the motor to reduction gear/deceleration mechanism 7, the latter including worm wheel 71,

an O-ring nonexistent between the members, and,

wherein the grease is charged between the members (as is well-known).

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It would have been obvious to one with ordinary skill in the art at the time the invention was made to include this configuration, as shown in Oka, to provide details of a well-known power steering system, and therefore define the scope of the invention. It is clear that various, functionally equivalent configurations of power steering systems exist, of which include well-known components such as "male and female joint members".

Neither Okaniwa nor Oka discloses the grease as including a base oil having a kinetic viscosity of 1000-5000 mm-sq/s at 40 deg C. Alexander teaches this feature in c1, ln 56-63, where the viscosity may range between "5-10,000 cSt at 40 deg C.

It would have been obvious to one with ordinary skill in the art at the time the invention was made to include this formulation, as shown in Alexander, to provide a particular grease for a specific application, thus increasing applicability. It is clear that the viscosity is determined via selection of a particular base oil, the selection being application-specific.

B. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okaniwa in view of Oka and Alexander, and in further view of Hasegawa et al 5550190.

The previous references disclose the elements as provided above, but does not disclose a wheel of the speed reduction mechanism as made of at least polybutylene terephthalate (PBT). Hasegawa shows a synthetic resin composite including this element in c11, ln 1-4, to form automotive components (c11, ln 44-46) requiring characteristics such as "strength...heat resistance, grease resistance" (c11, ln 34-37).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to include this feature, as shown in Hasegawa, to provide desired characteristics for components of the steering system, thus maximize proper function and longevity. However, it is clear that other, functionally equivalent materials may be employed for these objectives.

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3. The prior art found pertinent to the disclosure, but not relied upon, includes:
Corti et al 5124058, Schumacher et al 4504404, Caporiccio et al 4472290.

4. RESPONSE TO REMARKS


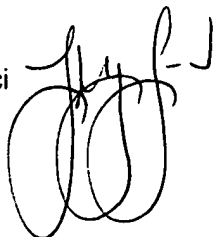
Examiner has provided new rejections using Okaniwa in combination with Oka and Alexander, etc. Okaniwa discloses the respective elements including "a base oil with a kinetic viscosity of 1000-5000 mm-sq/s at 40 deg C, as well within the disclosed range of "5-10,000 cSt at 40 deg C", c1, ln 61-63.

5. Communication with the Examiner/USPTO

Any inquiry concerning this communication, or others, should be directed to Ms. Lum at 571 272 6649, M-F, 9-5. If she can't be reached, her supervisor, Ms. Lesley Morris, may be reached at 571 272 6651. Our fax number is 571 273 8300.

Information re the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) System as follows: for unpublished apps - private PAIR only, for published apps - private or public PAIR. For more info on PAIR - <http://pair-direct.uspto.gov>. For more info on private PAIR - call the Electronic Business Center at 866 217 9197.

Ms. Lee Lum-Vannucci
Examiner
1/19/06



LESLEY D. MORRIS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600